ENGINEERING CHANGE PROPOSAL (SHORT FORM) *(See MIL-STD-481 for instructions)*	**DATE** *(YYYYMMDD)* 20041115	*Form Approved* OMB No. 0704-0188
	PROCURING ACTIVITY NUMBER N/A	

1. ORIGINATOR NAME AND ADDRESS
Ramanathan Ramaswamy
12350 Research Parkway
Orlando, FL 32826-3275

2. CONTRACT NUMBER AND LINE ITEM
N/A

3. PROCURING CONTRACTING OFFICER
N/A
CODE   TEL

4. TITLE OF CHANGE
Update PID numbers for MILES Code 35

5. ECP NUMBER MCC2004011	REV 4	AMEND	6. CAGE CODE N/A	7. CLASS OF ECP 3	8. JUST.CODE N/A	9.PRIORITY N/A

10. SPECIFICATIONS AFFECTED

CAGE CODE	SPECIFICATION / DOCUMENT NO.	REV
	PMT 90-S002	I

11. DRAWINGS AFFECTED

CAGE CODE	NUMBER	REV
	N/A	

12. CONFIGURATION ITEM NOMENCLATURE / TYPE DESIGNATION / WEAPON SYSTEM CODE
N/A

13. IN PRODUCTION
[ ] YES   [X] NO

14. LOWEST ASSEMBLY AFFECTED

NOMENCLATURE   PART NO.   NSN
N/A

15. DESCRIPTION OF CHANGE (Attach a document showing [a] existing document paragraph, figure, or table and [b] modified document paragraph, figure, or table with the change incorporated).

1. Change in table F1 for MILES Code 35 "Ammo type A and E" to "All." After the section that states "The Code 35 PID Useage for Controller Gun Functions" add "Table F2: PID No. for MILES Code 35 Ammo Types A and E". Change Decimal in Table header to "PID". Delete decimal 1321 "Enable". Change PID 0315 to Enable Controller Mode and PID 0316 to Disable Controller Mode. Correct "Useage" to "Usage" Add table "F3: PID No. for MILES Code 35 for Ammo type B and F", this table will contain only PID 001 which is "Enable Controller Mode".
2. In new Table F2, delete the second sentence starting with "Beep" under the Functions for Decimal 2001
3. In new Table F2, delete the second sentence starting with "Beep" under the Functions for Decimal 2002
4. Add 2057 under Decimal column and the corresponding "detector initialization" under functions column.
5. Add to Appendix E Code 35 all other Ammo types "See Appendix F".

16. NEED FOR CHANGE
1. Change will implement the correct PID for "Enable" function for TWGSS/PGS Controller Gun. This change will expand the number of available functions for the controller gun. Ammo Type A and E, PID 001,is being added as it was omitted by error.
2 and 3. This change will eliminate vendor specific operations.
4. This change will add MK-19 specific controller gun function.
5. This change will expand the number of available functions for the controller gun.

17. EFFECT ON ASSOCIATED EQUIPMENT
N/A

18. PRODUCTION EFFECTIVITY BY SERIAL NUMBER N/A	19. EFFECT ON PRODUCTION DELIVERY SCHEDULE N/A

20.RECOMMENDED RETROFIT EFFECTIVITY N/A	21. ESTIMATED KIT DELIVERY SCHEDULE N/A	22. ESTIMATED COST/SAVINGS N/A

23. SUBMITTING ACTIVITY AUTHORIZING SIGNATURE Ramu Ramaswamy Signed 11/8/2004	23.a. TITL PEOSTRI Engineer EL

24. APPROVAL/DISAPPROVAL   a. RECOMMENDED [X] APPROVAL   [ ] DISAPPROVAL

b. APPROVAL [ ] APPROVED [ ] DISAPPROVED	c. GOVERNMENT ACTIVITY PEOSTRI 12350 Research Parkway Orlando, FL 32826-3276	SIGNATURE Perry R. Smith, LTC AD PMLTS	DATE *(YYYYMMDD)* 20041119
d. APPROVAL [ ] APPROVED [ ] DISAPPROVED	e. GOVERNMENT ACTIVITY	SIGNATURE	DATE *(YYYYMMDD)*

DD FORM 1693, AUG 96 (EG)   PREVIOUS EDITION MAY BE USED.   Designed using Microsoft Word, Dec 99

<table>
<tr><td>15a. Existing document paragraph, figure, or table.</td></tr>
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TABLE F1: MILES CODE PARAMETERS FOR ADMINISTRATIVE FUNCTIONS

MILES Code No.	Ammo Type	PID No.	No. of Words (K1)	Function
30	All	All	8	N/A
36	All	All	8	N/A
35	A & E	See Below	Variable, minimum of 2.*	See Below

CODE 35 PID USEAGE FOR CONTROLLER GUN FUNCTIONS.
The numbers below identify the PIDs associated with Code 35 administrative functions:

PID No. for MILES Code 35

Decimal	**Functions**
162	**SMAW spotting rifle**
1 to 300	**SAT Random No. ID, or SAT Checksum data (1-256 only)**
301	**SAT 'Weapon Code Setup' acknowledge**
302	**SAT 'On' acknowledge**
303	**SAT 'Off' acknowledge**
304	**SAT (spare 1)**
305	**SAT (spare 2)**
306	**Surrogate ID request**
307	**Surrogate AT4 fire**
308	**Surrogate SMAW fire Anti-Armor**
309	**Surrogate SMAW fire Bunker Buster**
310	**Surrogate SMAW fire spotting rifle**
311	**Surrogate (spare 1)**
312	**Surrogate (spare 2)**
313	**Turret Position Sensor Signal**
314	**Turret Position Sensor battery low**
315	**Set Controller mode ON**
316	**Set Controller mode OFF**
317-330	**CIDDS Special Functions**
331	**Test**
661	**Time Mark**
1321	**Enable**
1000-1011	**Month***
1012-1042	**Date***
1043-1049	**Day of week (Sunday, Monday, etc.)***
1050-1073	**Hours after midnight (1050 = midnight)***
1074-1133	**Minutes (1074 = 0 minutes)***
1134-1193	**Seconds (1134 = 0 seconds)***
1194	**Time sync message complete***
2001	**Change even PID to odd by subtracting 1 from PID. Beep buzzer once for 100ms and send new PID and Laser Codes to SAT via Message ID 0x31 and 0x33.**
2002	**Change odd PID to even by adding 1 to PID. Beep buzzer once for 100ms and send new PID and Laser Codes to SAT via Message ID 0x31 and 0x33.**
2003	**Send domain of vest neuron chip to Controller Device. Used during Controller Device pairing. (Message ID 0x09)(Sub Message ID 0x30)**
2004	**Extend run-time of vest to 24 hours, beep buzzer once for 100ms**
2005	**Power off vest and all paired units, beep buzzer once for 100ms. Send power off message (Message ID 0x1B) to other devices.**

PID No. for MILES Code 35

Decimal	Functions
2006	**Report vest real time clock value (Message ID 0x74) to Controller Device.**
2007	**Clear vest events and rounds related counters, beep buzzer once for 100ms**
2049	**Change belt number to 1. (Front)**
2050	**Change belt number to 2. (Right)**
2051	**Change belt number to 3. (Rear)**
2052	**Change belt number to 4. (Left)**
2053	**Change belt number to 5. (Front-Right)**
2054	**Change belt number to 6. (Rear-Right)**
2055	**Change belt number to 7. (Rear-Left)**
2056	**Change belt number to 8. (Front-Left)**

TABLE E1: AMMUNITION TYPE PARTITIONING ASSIGNMENT

MILES Code	Weapon/Munitions	Ammo Factors							
		A & E	B & F	C & G	D & H	I & M	J & N	K & O	L & P
00	Universal Kill	Universal Kill							
01	Hellfire								
02	Unassigned								
03	AT-3								
04	Unassigned								
05	Unassigned								
06	Unassigned								
07	TOW, AT-5 (Konkurs)	TOW –IIA	TOW-IIB	AT-5	TOW F&F Alternate mode.				
08	Dragon								
09	Fire & Forget Missiles	Javelin	TOW F&F	LOSAT					
10	125 mm	SABOT	HEAT	HE	Cumulative (K)				
11	Claymore, Mine								
12	105 mm	SABOT	HEAT						
13	122 mm ARTY DF								
14	73 mm, 2.75" Rocket, 57 mm								
15	Viper, RPG-7, Carl Gustav, AT-4	Carl Gustav	RPG-7	AT-4	Viper				
16	120 mm	SABOT	HEAT						
17	90 mm	SABOT	HEAT						
18	152 mm, 155 mm								
19	40 mm Grenade	M430	M385	M918	M918				
20	Rockeye, SMAW								
21	30 mm, GAU-8								
22	25 mm, ZSU 23-4	SABOT	HEAT						
23	30mm (NTC HIND-D), Vulcan								
24	Heavy MG (M2, M85)	Vehicle Mounted		Ind. Weapon	Ind. Weapon				
25	Chaparral, SAM								
MILES Code	Weapon/Munition	Ammo Factors							
		A & E	B & F	C & G	D & H	I & M	J & N	K & O	L & P
26	Stinger								
27	Small Arms (M16, M60, Coax)	Vehicle Mounted	Crew Served	Ind. Weapon	Ind. Weapon				
28	Heavy Weapon Miss								
29	Light Weapon Miss	Vehicle Mounted	Crew Served	Ind. Weapon	Ind. Weapon				
30	Resurrect (GND Systems), Reset (Aircraft Systems)								
31	Heavy Spare Miss								
32	RF SAM								
33	SA-14								
34	AAA-2 30mm								
35	Controller Gun Utility Codes	See Appendix F							
36	Reset (GND Systems), Resurrect (Aircraft Systems)								
	Boresight (Continuous Transmission)								

15b. Modified document paragraph, figure, or table with the change incorporated. Ammo Type A and E

TABLE F1: MILES CODE PARAMETERS FOR ADMINISTRATIVE FUNCTIONS

MILES Code No.	Ammo Type	PID No.	No. of Words (K1)	Function
30	All	All	8	N/A
36	All	All	8	N/A
35	All	See Below	Variable, minimum of 2.*	See Below

CODE 35 PID USAGE FOR CONTROLLER GUN FUNCTIONS.
The numbers below identify the PIDs associated with Code 35 administrative functions:

Table F2: PID No. for MILES Code 35 for Ammo Types A and E	
PID	**Functions**
162	SMAW spotting rifle
1 to 300	SAT Random No. ID, or SAT Checksum data (1-256 only)
301	SAT 'Weapon Code Setup' acknowledge
302	SAT 'On' acknowledge
303	SAT 'Off' acknowledge
304	SAT (spare 1)
305	SAT (spare 2)
306	Surrogate ID request
307	Surrogate AT4 fire
308	Surrogate SMAW fire Anti-Armor
309	Surrogate SMAW fire Bunker Buster
310	Surrogate SMAW fire spotting rifle
311	Surrogate (spare 1)
312	Surrogate (spare 2)
313	Turret Position Sensor Signal
314	Turret Position Sensor battery low
315	Enable Controller Mode
316	Disable Controller Mode
317-330	CIDDS Special Functions
331	Test
661	Time Mark
1000-1011	Month*
1012-1042	Date*
1043-1049	Day of week (Sunday, Monday, etc.)*
1050-1073	Hours after midnight (1050 = midnight)*
1074-1133	Minutes (1074 = 0 minutes)*
1134-1193	Seconds (1134 = 0 seconds)*
1194	Time sync message complete*
2001	Change even PID to odd by subtracting 1 from PID.
2002	Change odd PID to even by adding 1 to PID.
2003	Send domain of vest neuron chip to Controller Device. Used during Controller Device pairing. (Message ID 0x09)(Sub Message ID 0x30)
2004	Extend run-time of vest to 24 hours, beep buzzer once for 100ms
2005	Power off vest and all paired units, beep buzzer once for 100ms. Send power off message (Message ID 0x1B) to other devices.
2006	Report vest real time clock value (Message ID 0x74) to Controller Device.
2007	Clear vest events and rounds related counters, beep buzzer once for 100ms
2049	Change belt number to 1. (Front)

Table F2: PID No. for MILES Code 35 for Ammo Types A and E	
PID	**Functions**
2050	**Change belt number to 2. (Right)**
2051	**Change belt number to 3. (Rear)**
2052	**Change belt number to 4. (Left)**
2053	**Change belt number to 5. (Front-Right)**
2054	**Change belt number to 6. (Rear-Right)**
2055	**Change belt number to 7. (Rear-Left)**
2056	**Change belt number to 8. (Front-Left)**
2057	**Detector Initialization**

Table F3: PID No. for MILES Code 35 for Ammo Types B and F	
PID	**Functions**
001	**Enable Controller Mode**

TABLE E1: AMMUNITION TYPE PARTITIONING ASSIGNMENT

MILES Code	Weapon/Munitions	Ammo Factors							
		A & E	**B & F**	**C & G**	**D & H**	**I & M**	**J & N**	**K & O**	**L & P**
00	Universal Kill	Universal Kill							
01	Hellfire								
02	Unassigned								
03	AT-3								
04	Unassigned								
05	Unassigned								
06	Unassigned								
07	TOW, AT-5 (Konkurs)	TOW -IIA	TOW-IIB	AT-5	TOW F&F Alternate mode.				
08	Dragon								
09	Fire & Forget Missiles	Javelin	TOW F&F	LOSAT					
10	125 mm	SABOT	HEAT	HE	Cumulative (K)				
11	Claymore, Mine								
12	105 mm	SABOT	HEAT						
13	122 mm ARTY DF								
14	73 mm, 2.75" Rocket, 57 mm								
15	Viper, RPG-7, Carl Gustav, AT-4	Carl Gustav	RPG-7	AT-4	Viper				
16	120 mm	SABOT	HEAT						
17	90 mm	SABOT	HEAT						
18	152 mm, 155 mm								
19	40 mm Grenade	M430	M385	M918	M918				
20	Rockeye, SMAW								
21	30 mm, GAU-8								
22	25 mm, ZSU 23-4	SABOT	HEAT						
23	30mm (NTC HIND-D), Vulcan								
24	Heavy MG (M2, M85)	Vehicle Mounted		Ind. Weapon	Ind. Weapon				
25	Chaparral, SAM								
26	Stinger								
27	Small Arms (M16, M60, Coax)	Vehicle Mounted	Crew Served	Ind. Weapon	Ind. Weapon				
28	Heavy Weapon Miss								
29	Light Weapon Miss	Vehicle Mounted	Crew Served	Ind. Weapon	Ind. Weapon				
30	Resurrect (GND Systems), Reset (Aircraft Systems)								
31	Heavy Spare Miss								
32	RF SAM								
33	SA-14								

MILES Code	Weapon/Munitions	Ammo Factors							
		A & E	B & F	C & G	D & H	I & M	J & N	K & O	L & P
34	AAA-2 30mm								
35	Controller Gun Utility Codes	See Appendix F	See Appendix F	See Appendix F	See Appendix F	See Appendix F	See Appendix F	See Appendix F	See Appendix F
36	Reset (GND Systems), Resurrect (Aircraft Systems)								
	Boresight (Continuous Transmission)								